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"The Spectrum Must Flow!": The Need for Rule of Reason Analysis of Spectrum Transfers at the FCC

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"The Spectrum Must Flow!": The Need for Rule of Reason Analysis of Spectrum Transfers at the FCC

Matthew Starr, Geoffrey A. Manne & Berin Szoka | TechFreedom[1]

Introduction

The FCC's current policies and rules regarding mobile spectrum holdings are in desperate need of an upgrade. The landscape of the wireless market has changed dramatically over the last several years, and consumers' demand for mobile broadband services is skyrocketing with little new supply [of spectrum?] coming online [available?] in the near future. If consumers' demands are to be met, spectrum must be allowed to "rise to its highest valued use." This means there must be a functional market by which spectrum can be transferred from those who currently hold it to those who value it more. In other words, to paraphrase Frank Herbert's classic novel *Dune*, "the spectrum must flow!"

But for that to happen the FCC can't sit as an impediment to consumer-welfare enhancing transactions that re-allocate spectrum to these highest valued uses. The Commission's current spectrum transfer review process is not up to the task, and some of the proposed reforms would only exacerbate the problem. Heeding Commissioner's McDowell's urging that "interested parties [] comment on the potential for negative market effects should the Commission inch down the road toward spectrum caps or other new mandates," we submit this comment to suggest that the FCC must adopt a more economically-rigorous approach to license transfer reviews — one that does not trade away effectiveness for the sake of mere administrability nor dynamic, forward-looking efficiency for the sake of the Commission's flawed vision of an optimal, static market structure.

Rather, the FCC should follow the lead of its antitrust agency counterparts and employ a "rule of reason" analysis in its review of spectrum transfers. Moreover, the FCC should defer to the comparative advantage of its antitrust agency counterparts in the review of transactions that come before both the FCC and the DOJ or FTC, and forebear from such analysis entirely except to inform and advise the DOJ's or FTC's comprehensive antitrust review. Under no circumstances should the FCC re-impose spectrum caps or other new mandates that would only serve to thwart, not encourage, the progress of our wireless markets: While the current review process is flawed, a spectrum cap would be even worse.

The Wireless Market Today

The wireless industry is thriving and growing at an unprecedented rate. As of June 2010, there were 293 million wireless subscribers in the U.S., up from just 38 million in June of 2006, and those numbers are continuing to grow.[2] Data traffic has become the driver of the wireless industry as more consumers rely on their phones for broadband with each passing day. And demand will only continue to grow as more of the population moves to smartphones and more content and applications become available via wireless broadband. Following the introduction of the iPhone

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[2] These Comments draw on the Comments we filed in March 2012 on the FCC's review of the Verizon/SpectrumCo transaction, *available at* http://techfreedom.org/sites/default/files/VZ_SpectrumCo_filing_0.pdf.

2007, AT&T reported that "data volumes had increased by 8,000 percent by 2010."[3] Industry-wide, there was a 100% increase in data traffic from 2009 to 2010.[4] Looking forward, AT&T projects that data traffic will, by 2015, grow to eight to ten times its 2010 level.[5] Of particular note, as Commissioner McDowell points out, "the number of subscribers has increased from 128.4 million to 285.6 million through 2009 since the Commission sunset the spectrum cap in 2001."[6]

If data service demand projections hold, in a few short years wireless companies won't have enough spectrum to handle the traffic on their networks. As a result, we are bound to see a degradation of service, lower thresholds (in megabytes, minutes, texts, etc.) between service tiers (if not outright caps), and data prices going through the roof. Innovation will suffer on the sides of both the wireless providers and the content developers, and investment in the industry will inevitably decline. Consumers will find themselves paying more and more, yet receiving less and less for their money—the inevitable result of demand outstripping supply. The growth of the wireless industry and the development of LTE networks has been one of the great American success stories in the last four years despite the broader economic climate. And even now analysts expect that future investment will be substantial, estimating that, between from 2012 and 2016, another $25-$53 billion will be invested in the wireless industry.[7] But if industry flounders against an artificial, government-imposed shortage of spectrum, it is consumers that will suffer.

The FCC and other government entities have repeatedly acknowledged the looming "spectrum crunch." The National Broadband Plan estimated that mobile broadband will need 500 MHz of additional spectrum in the next ten years.[8] The Commission's Fifteenth Wireless Competition Report ("Fifteenth Report") predicted that "mobile broadband growth is likely to outpace the ability of technology and network improvements to keep up by an estimated factor of three, leading to a spectrum deficit that is likely to approach 300 megahertz within the next five years."[9] The obvious solution to the spectrum gap is to make more spectrum available.

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[3] Larry Downes, *Averting a Spectrum Disaster: Now for the Hard Part*, CNET NEWS, Feb. 25, 2012, *available at* http://news.cnet.com/8301-1035_3-57385202-94/averting-a-spectrum-disasternow-for-the-hard-part/.

[4] Executive Office of the President, Council of Economic Advisers, THE ECONOMIC BENEFITS OF NEW SPECTRUM FOR WIRELESS BROADBAND, (Feb. 2012).

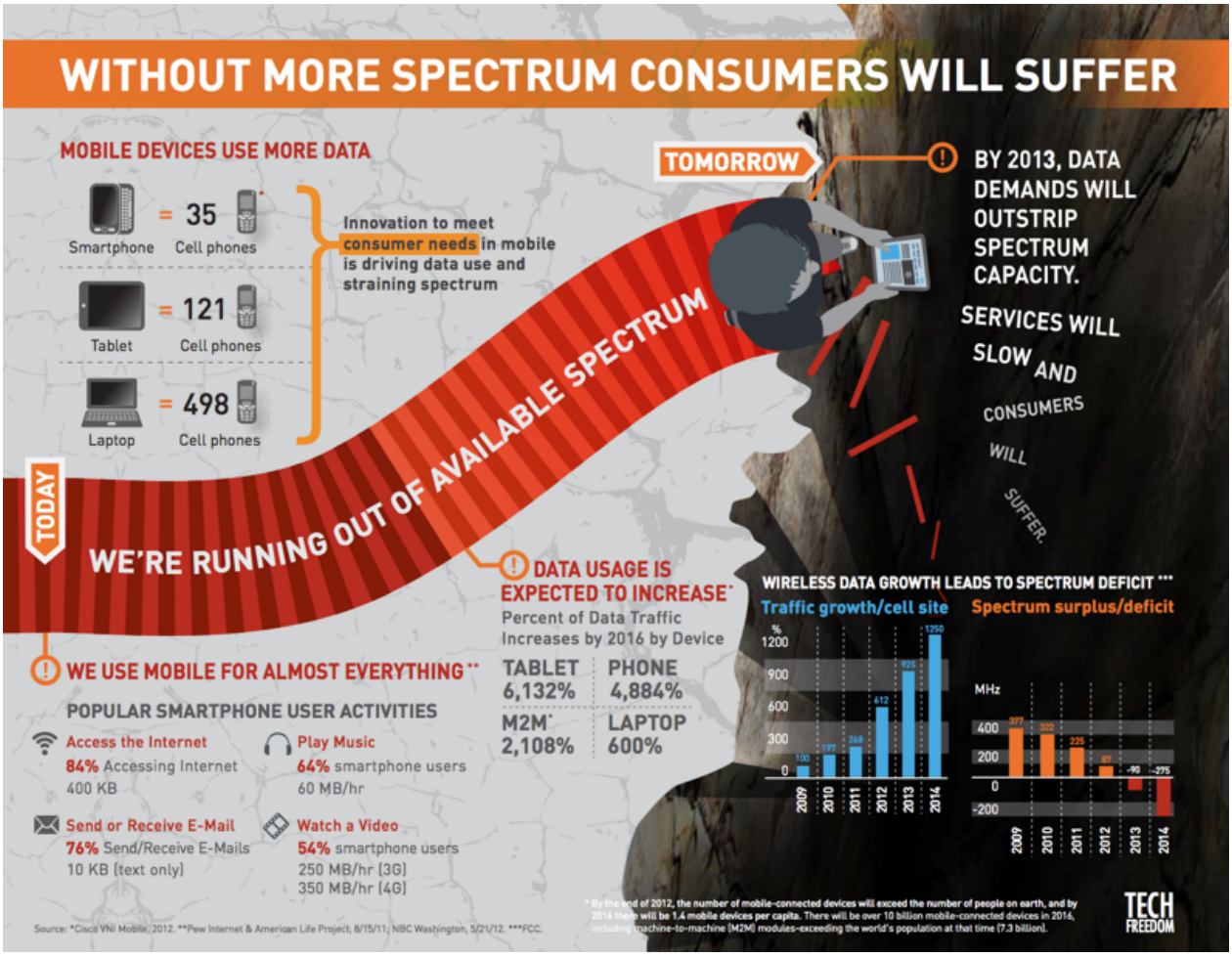
[5] Marguerite Reardon, *Is AT&T Considering Throttling Heavy Data Users?*, CNET NEWS, July 28, 2011, *available at* http://news.cnet.com/8301-30686_3-20085179-266/is-at-t-consideringthrottling-heavy-data-users/.

[6] *IN RE* POLICIES REGARDING MOBILE SPECTRUM HOLDINGS, WT Docket No. 12-269, Notice of Proposed Rulemaking, Statement of Commissioner Robert M. McDowell (2012), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0928/FCC-12-119A1.pdf. (*citing* IMPLEMENTATION OF SECTION 6002(B) OF THE OMNIBUS BUDGET RECONCILIATION ACT OF 1993, ANNUAL REPORT AND ANALYSIS OF COMPETITIVE MARKET CONDITIONS WITH RESPECT TO COMMERCIAL MOBILE SERVICES, Fifteenth Report, 26 FCC RCD 9664, 9760 (2011) ("Fifteenth Report")).

[7] Deloitte, THE IMPACT OF 4G TECHNOLOGY ON COMMERCIAL INTERACTIONS, ECONOMIC GROWTH, AND U.S. COMPETITIVENESS, (Aug. 2011), *available at* http://www.deloitte.com/us/impactof4g.

[8] *See* FCC, CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN 75 (2010), *available at* http://www.broadband.gov/plan/.

[9] Fifteenth Report, 26 FCC RCD at 9821 ¶ 267.



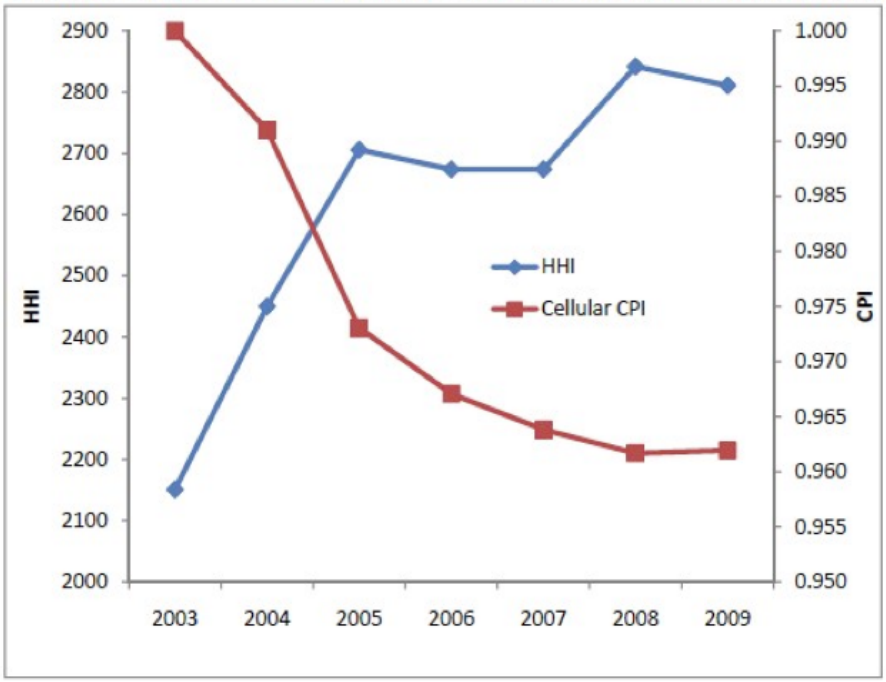
While efforts are obviously being made to get spectrum into the hands of wireless providers, the process isn't moving fast enough. There hasn't been a major wireless spectrum auction since 2008, and the FCC has no more large swaths of spectrum to auction off anyway. Congress should be applauded for passing legislation that allows the FCC to conduct incentive auctions for broadcast television spectrum, but there is no guarantee that such auctions (still several years away) will yield the amount of spectrum hoped for by the FCC demanded by wireless providers and their customers. Much has been made of convincing federal agencies to share or divest some of their spectrum, but no clear consensus has been reached on how to accomplish that effectively. Thus, the two primary means for wireless companies to obtain additional spectrum today are (1) to purchase it from other companies and (2) simply to purchase those companies.

The FCC's Current Spectrum Holding Rules Rely on Faulty Economic Principles and Presumptions

Despite these dire predictions and the manifest need for spectrum transfers on the secondary market, the FCC has stood steadfast in preserving an outdated model of evaluating mobile spectrum holdings that prevents wireless providers from expanding their networks, to the detriment of consumers. The current spectrum screen rests on the rickety premise that concentration in markets inherently leads to anticompetitive behavior, a premise that has been shown not to apply to dynamic markets such as the wireless industry.

Simply having more competitors in a market does not necessarily result in lower prices and better service for consumers, particularly in an industry like wireless that requires a massive investment in infrastructure and the acquisition of viable bands of spectrum just to get off of the ground. In fact, as the market has grown more concentrated in recent years, investment in the industry has increased and prices for consumers have decreased. The Fifteenth Report documents that since 1997, prices have been decreasing,[10] and coverage and technology have been increasing steadily in the wireless industry.[11]

FIGURE 1: INDUSTRY CONCENTRATION IS RISING WHILE CELLULAR PRICES ARE FALLING



Source: HHI from 15th Wireless Report Table 9; Cellular CPI from 15th Wireless Report Table 19.
Notes: Population-weighted average HHI of 172 Economic Areas as computed by the Commission. Cellular CPI is denominated in 2003 prices.

From Gerald R. Faulhaber, Robert W. Hahn & Hal J. Singer, *Assessing Competition in U.S. Wireless Markets: Review of the FCC's Competition Reports* (2011), *available at* http://ssrn.com/abstract=1880964.

[10] ID. at 9675 ¶ 2.
[11] ID. at 9696-97 ¶ 31.

Moreover, merely possessing spectrum licenses is only a small fraction of what it takes to succeed in the wireless industry. Making effective use of that spectrum requires towers, switches, routers, security, maintenance, customer service, innovation and risky investment in all of these. These are the factors that set AT&T and Verizon apart from the competition—not merely, as their critics would have it, their spectrum share or market capitalization. They may be the two largest holders of wireless spectrum, but they have also invested substantially more in their network infrastructure than other carriers, built out faster and more geographically-broad service, worked with device manufacturers to ensure compatibility, invested in quality control and maintenance capacity to minimize network outages, developed and employed advanced network management tools, and a whole host of other ancillary services all of which are necessary to delivering effective mobile broadband services.

A Revamped Case-by-Case Analysis Is Necessary

Rather than limiting concentration in the wireless market based on the outdated equation of market power with consumer harm, the Commission ought to enable companies to meet consumers' clamoring for more spectrum—because this is a better means of serving what should be the ultimate goal of competition policy: promoting consumer welfare. The FCC's process for evaluating spectrum holdings should reflect that shift. The process should strike a balance between getting spectrum into the market for the needs of consumers and protecting consumers from anticompetitive behavior by companies. To do so, the FCC should follow the lead of antitrust law, which has largely abandoned *per se* prohibitions in favor of empirically meaningful, economically driven merger analysis and other "rules of reason" that incorporate dynamic efficiency concerns far better than do more static, structural presumptions.[12]

A return to the *per se* (or "bright-line limit") approach to spectrum holding analysis that the Commission abandoned in 2003 makes no sense in today's competitive wireless market. As Commissioner McDowell noted in his Statement, the Commission eliminated the hard cap "after determining that spectrum aggregation limits were no longer necessary due to meaningful competition among providers of telecommunications services."[13] The impressive growth in not only the size of the wireless market over the last nine years but also its quality, affordability and geographic reach — to say nothing of the enormous amount of investment by alleged monopolists in these markets — is powerful evidence of robust competition.[14]

A hard cap on spectrum holdings would needlessly allow for zero balancing of the procompetitive, consumers benefits that future transactions could provide. Customers of the nation's two largest wireless companies, Verizon and AT&T — that is, most of us — would suffer greatly under a hard cap, as the cap would likely result in preventing these companies from adding spectrum to improve

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[12] *See* Douglas H. Ginsburg and Joshua D. Wright, *Dynamic Analysis and the Limits of Antitrust Institutions*, 78 ANTITRUST L. J. 1 (2012).

[13] *IN RE* POLICIES REGARDING MOBILE SPECTRUM HOLDINGS, WT Docket No. 12-269, Notice of Proposed Rulemaking, Statement of Commissioner Robert M. McDowell (2012), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0928/FCC-12-119A1.pdf.

[14] *See* Fifteenth Report at 9791-94 ¶¶ 206-11. The Report notes that "Between 1999 and 2009, industry-wide capital investment by wireless providers exceeded $213 billion," and that from 2004-2009, providers invested between $20.7 billion and $27.9 billion each year. Verizon and AT&T combined to invest between $10-$13 billion annually from 2005-2009.

their service to meet current — let alone future — demand. A majority of wireless customers in America would face diminished service under such a rule. The Commission should instead retain a case-by-case process for reviewing spectrum acquisitions to be able to adjust for the nuances of each particular transaction; the spectrum screen simply is not the proper vehicle for a pro-consumer case-by-case analysis.

Problems with the Current Spectrum Screen

The first part of the screen, which uses the Herfindahl-Hirschman Index (HHI) to assess the change in market concentration as a result of a proposed transaction, no longer makes sense. Modern economic analysis has shown that HHIs (and other concentration measures) are not reliable tools for measuring competitive effects in dynamic markets with rapidly developing technologies.[15] The economic theory supporting the use of HHIs suffers from the same analytical problem underlying the FCC's analysis of spectrum transactions as a whole: They both rest on the outdated "structural presumption" that high levels of concentration in a market leads to anticompetitive prices and harm to consumers. This is particularly problematic in wireless markets, as former FCC economists Michelle Connolly and James Prieger have argued: "[t]raditional market definition analysis, based on whether a firm's price is constrained by existing competitors, can give a seriously misleading picture of competitive relations in dynamic markets with rapidly developing technology."[16]

In fact, there is ample evidence that concentration in today's wireless markets have yielded considerable benefits for consumers. As the market has grown more concentrated, prices have fallen, networks have been expanded, and there has been massive investment in the industry. And this isn't surprising: Operation of wireless broadband isn't cheap. Verizon alone has spent $65 billion building its networks[17], and there are likely considerable economies of scale driving the industry's growth. These trends run precisely contrary to the presumption that concentration harms competition and consumers.

In truth, it is impossible to know exactly what degree of concentration in this (or any) market is ideal. As the DOJ stated in its comments to the National Broadband Plan, "We do not find it especially helpful to define some abstract notion of whether or not broadband markets are 'competitive.' Such a dichotomy makes little sense in the presence of large economies of scale, which preclude having many small suppliers and thus often lead to oligopolistic market structures."[18] The FCC, too, acknowledged in the Fifteenth Report that the wireless markets can be both concentrated and highly competitive given market factors including "entry conditions [and]

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[15] See, e.g., Michael L. Katz & Howard A. Shelanski, *Mergers and Innovation*, 74 ANTITRUST L.J. 1, 22 (2007) ("[T]he literature addressing how market structure affects innovation (and vice versa) in the end reveals an ambiguous relationship in which factors unrelated to competition play an important role."); J. Gregory Sidak & David F. Teece, *Dynamic Competition in Antitrust Law*, 5 J. COMPETITION L. & ECON. 581, 588 (2009) ("[D]espite 50 years of research, economists do not appear to have found much evidence that market concentration has a statistically significant impact on innovation.").

[16] Michelle Connolly & James Prieger, *Economics at the FCC, 2008-2009: Broadband and Merger Review*, 35 REV. INDUS. ORG. 387, 404 (2009).

[17] *See* VERIZON INDUSTRY OVERVIEW, Chapter 4, *available at* http://www22.verizon.com/investor/industryoverview.htm.

[18] *Ex Parte Submission of the Department of Justice* on ECONOMIC ISSUES IN BROADBAND COMPETITION: A NATIONAL BROADBAND PLAN FOR OUR FUTURE at 11, GN Docket No. 09-51 (2009), *available at* http://www.justice.gov/atr/public/comments/253393.pdf.

degree of price and non-price rivalry."[19] And this is supported by basic economics. As Harold Demsetz has pointed out,

> Once perfect knowledge of technology and price is abandoned, [competitive intensity] may increase, decrease, or remain unchanged as the number of firms in the market is increased . . . . [I]t is presumptuous to conclude . . . that markets populated by fewer firms perform less well or offer competition that is less intense.[20]

Simply put, the wireless market, by the nature of the industry, *will* be heavily concentrated in a small number of large companies, so an analysis that starts with the presumption that market concentration is inherently bad for competition is essentially useless for ensuring its competitiveness. Nevertheless, even with barriers to entry, additional competition is continually appearing: Dish Network plans to build a 4G network in the near future (perhaps with a significant investment from Google); MetroPCS and T-Mobile are planning to merge to become a more formidable competitor; Sprint is expecting an enormous cash infusion from Japan-based telecommunications company Softbank; and, although since scuttled, LightSquared made an innovative play to offer satellite-based wireless broadband.

Further, the market today is not even as concentrated as it is often made out to be. While nationally, four carriers may comprise the bulk of wireless subscribers, on the local level — the level where customers actually make their wireless network choices — 90% of the population can choose from by five or more wireless voice providers[21] and 68% is covered by four or more mobile broadband providers.[22]

Against this backdrop the FCC imbues its HHI analysis with unwarranted power. As the Commission has stated,

> Generally, we find that, in any market in which the transaction would reduce the number of genuine competitors to three or fewer, the proposed transaction may result in a significant likelihood of successful unilateral effects and/or coordinated interaction."[23]

By contrast, the DOJ and FTC's Merger Guidelines evidence a much more informed perspective on HHI thresholds as an analytical tool, noting that "they provide one way to identify some mergers unlikely to raise competitive concerns and some others for which it is particularly important to examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration," and that they help determine only "the likelihood that

[19] Fifteenth Report at 9702 ¶ 40.
[20] Harold Demsetz, *The Intensity and Dimensionality of Competition*, in THE ECONOMICS OF THE BUSINESS FIRM: SEVEN CRITICAL COMMENTARIES 137, 140-41 (1995).
[21] Fifteenth Report at 9705 ¶ 45.
[22] Id. at 9706 ¶ 46.
[23] *IN RE* APPLICATIONS OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS AND ATLANTIS HOLDINGS LLC FOR CONSENT TO TRANSFER CONTROL OF LICENSES, AUTHORIZATIONS, AND SPECTRUM MANAGER AND *DE FACTO* TRANSFER LEASING ARRANGEMENTS AND PETITION FOR DECLARATORY RULING THAT THE TRANSACTION IS CONSISTENT WITH SECTION 310(B)(4) OF THE COMMUNICATIONS ACT, WT Docket No. 08-95, Memorandum Opinion and Order and Declaratory Ruling, 23 FCC RCD 17444, 17491 ¶ 101 (2008).

the Agencies will request additional information"[24] — not conclusions about a transaction's competitive effects.

A "likelihood that the Agencies will request for additional information" is a far cry from a "significant likelihood of" anticompetitive effects. Even where the Merger Guidelines do begin to draw inferences from certain (extremely high) degrees of concentration and/or increases in concentration, they infer only "the enhance[ment] of market power"[25] — not anticompetitive outcomes.

The reason for the FCC's stronger inference of harm is clear: Devout adherence to the structural presumption. For this one need look no further than the agency's alleged "market-by-market" analysis of competitive effects in its transaction reviews where the screen is triggered. Despite paying lip service to consideration of factors other than market shares and concentration to determine these effects, the Commission cites as the relevant variables for assessing competitive effects:

> The total number of rival service providers; the number of rival firms that can offer competitive nationwide service plans; the coverage of the firms' respective networks; the rival firms' market shares; the merged entity's post-transaction market share and how that share changes as a result of the transaction; the amount of spectrum suitable for the provision of mobile telephony/broadband services controlled by the combined entity; and the spectrum holdings of each of the rival service providers.[26]

Not a single one of these factors investigates an aspect of competition other than market or spectrum concentration; they simply restate in more detail precisely the structural analysis implied by the HHI test and spectrum screen.

The contrast between the conclusions drawn by the FCC and the antitrust agencies from their respective use of HHIs is stark: The antitrust agencies use HHIs as just one of many tools to inform the depth of their analysis of a transaction, while the FCC employs them essentially as an easy, but analytically lazy, analytical endpoint. If the FCC insists on relying on concentration metrics at all, it should defer to the approach taken by the FTC and DOJ as expert competition agencies — using HHIs as a trigger for further scrutiny, rather than a de facto trigger for a per se presumption.

Just as problematic is the second part of the spectrum screen, which examines the amount of spectrum that is suitable and available for mobile service on a market-by-market basis and determines whether a transaction would result in ownership of "too large" a fraction of spectrum, thus facilitating anticompetitive conduct. This approach not only suffers from the same structural presumption as the HHI analysis, but also creates enormous regulatory uncertainty. Because the "amount of usable spectrum" piece of the equation is in constant flux, it is impossible to predict whether any particular transaction will trigger the screen. Further, an ever-changing screen masks

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[24] DOJ/FTC JOINT HORIZONTAL MERGER GUIDELINES at 19 (2010), available at http://www.ftc.gov/os/2010/04/100420hmg.pdf.
[25] ID.
[26] *IN RE* APPLICATIONS OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS AND ATLANTIS HOLDINGS LLC FOR CONSENT TO TRANSFER CONTROL OF LICENSES, AUTHORIZATIONS, AND SPECTRUM MANAGER AND *DE FACTO* TRANSFER LEASING ARRANGEMENTS AND PETITION FOR DECLARATORY RULING THAT THE TRANSACTION IS CONSISTENT WITH SECTION 310(B)(4) OF THE COMMUNICATIONS ACT, WT Docket No. 08-95, Memorandum Opinion and Order and Declaratory Ruling, 23 FCC RCD 17444, 17487 ¶ 91 (2008).

possible manipulation by the FCC on a transaction-by-transaction basis to justify whatever conclusion it deems appropriate.

The Commission's review of the AT&T/T-Mobile merger illustrated how the current spectrum screen can be manipulated. There, it appears that the FCC may have considered altering the spectrum screen — and released a draft report on the merger incorporating this alteration — specifically to make the transaction appear as negative as possible to the public, as the proposed change would have caused the deal to trigger the spectrum screen in 50% more markets than would the screen prior to the change. Once the deal was abandoned, the proposed change never manifested.[27]

If the FCC insists on retaining the current spectrum screen, it should be reviewed — transparently — at regular intervals. Today, by contrast, it is adjusted in an ad hoc, secretive process susceptible to the kind of manipulation we saw in the AT&T case. If it continues to be employed, the spectrum screen needs to remain flexible in order to account for changes in technology and in the marketplace (the advantages of following a rule of reason in general), but the FCC should not be able to adjust the screen within the course of a particular transaction; whatever adjustments the FCC makes, transactions should be guided by predictable, economically-sensible standards.

Thus, if it keeps the screen, the FCC should issue an order that lays out what spectrum will and will not be included in the screen on an annual, bi-annual or even quarterly basis. All applications for the transfer of spectrum licenses would subsequently be reviewed under the screen in place at the time the application is filed, regardless of whether the screen is adjusted before a decision is rendered. This approach would increase regulatory certainty by allowing companies to actually know what spectrum screen will be applied to their transaction before filing an application with the FCC.

Replacing the Spectrum Screen with a Rule of Reason Analysis

While minor tweaks to the spectrum screen and HHI analysis will improve the process of analyzing spectrum holdings, the FCC would be better served by eliminating the spectrum screen and starting from scratch. Particularly in a dynamic, innovative industry like wireless, the FCC's approach represents a costly adherence to outdated, static competition analysis. As former Assistant Attorney General Tom Barnett has stressed:

> While static efficiency is important, the greater share of welfare gains—sometimes the much greater share—comes from technical change and the forces of dynamic efficiency. . . . [A]ntitrust enforcers must be careful not to pursue immediate, static efficiency gains at the expense of long-term, dynamic efficiency improvements, since the latter are likely to create more consumer welfare than the former. Accordingly, U.S. enforcers approach practices that bear on innovation incentives with something close to the medical principle of 'first, do no harm.'[28]

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[27] *See* Larry Downes & Geoffrey A. Manne, *The FCC's Unstructured Role in Transaction Reviews*, CPI ANTITRUST CHRONICLE at 6-7, (Oct. 2012) *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2163169.

[28] Thomas Barnett, Presentation to the George Mason University Law Review, "Maximizing Welfare Through Technological Innovation" (31 October 2007), *available at* http://www.usdoj.gov/atr/public/speeches/227291.htm.

There is no reliable evidence that a carrier's control of more than a third of the usable spectrum in a market has, *ipso facto*, the power to harm consumers — and still less evidence that prohibiting spectrum transfers that exceed this threshold serves "the forces of dynamic efficiency." Using HHIs and this arbitrary threshold doesn't further what should be the FCC's overriding objective: ensuring that sufficient spectrum and the investment necessary to deploy it are available for consumer use. Instead of merely citing market concentration as the basis for rejecting a transaction, we need an analysis of why a proposed transaction would actually make consumers worse off — the lodestar of antitrust law.

Following the lead of its antitrust agency counterparts, the FCC must take seriously the risks of static, concentration-based analysis. It should replace its spectrum screen with a rule of reason analysis and use a consumer harm standard when evaluating spectrum transfers. The analysis would operate in a manner similar to the rule of reason in antitrust law (and embodied in the Merger Guidelines), whereby transactions are rigorously evaluated to determine if their possible anticompetitive effects outweigh their likely procompetitive benefits. While the FCC already purports to conduct a similar type of analysis in markets where the spectrum screen is triggered, that analysis in practice, as noted above, is still based on an evaluation of concentration in wireless markets; it is merely a more detailed version of the screen.

Instead, the FCC should abandon its focus on the percentage of spectrum held by a company and replace it with a system that evaluates how increased spectrum holdings actually affect consumers and weighs those likely effects against any efficiencies or procompetitive justifications supporting a transfer. Competition from other wireless providers is certainly part of the analysis, but there are a number of other factors that should be considered including, among other things, how and when spectrum would be deployed with and without a transfer, how efficiently it would be used with and without a transfer, and whether its deployment is better supported by the requisite technological, physical and organizational apparatus to deliver quality service to consumers before or after a transfer.

Perhaps most important, this competitive analysis simply can't generate reliable conclusions if spectrum is analyzed independently from broader competitive conditions. Thus, a proper competitive analysis would also include assessment of competition from imperfect substitutes (e.g., fixed wireless and fixed terrestrial broadband), technological developments that may or will alter spectrum efficiency and entry, product (and quality) differentiation among competitors, historical price and quality changes in the market, the likelihood of coordinated effects, the presence of buyer power, constraints arising from other layers of the network (e.g., device makers and content providers), the presence and extent of switching costs, and possible intellectual property-based constraints on competition — among others.

Perhaps the most important factor to consider in such an analysis is the benefit to consumers from *expanded* rather than contracted network holdings. The ability of a wireless provider to meet its customers' future data demands (and to deploy the resources necessary to capitalize on spectrum holdings sufficient to do so) is crucial to a sensible analysis, and yet it plays little or no role in the current system. With a spectrum crunch on the horizon, it is essential that sustained viability and capacity in the face of rapidly expanding demand becomes the focus of FCC transaction analysis. Consumers should not suffer from inferior service — today or tomorrow — just because a transaction might increase concentration on paper.

We have noted elsewhere that this sort of competition analysis is the proper province of the expert antitrust agencies, not the FCC.[29] We continue to have qualms about competition review at the FCC. And when, as in the case of a telecom merger notified under Hart-Scott-Rodino to the antitrust agencies, the DOJ or FTC engages in a competition analysis, we continue to maintain that the FCC's review should focus narrowly on telecom-specific issues (e.g., compliance with FCC rules and fitness to hold a license) and the FCC should act to advise and inform the antitrust agency's determination; its own competition review should not have dispositive effect.

But when, as in the case of a simple spectrum license transfer that does not meet HSR notification thresholds nor merit review by the FTC or DOJ, the FCC is the sole arbiter of a transaction's regulatory approval, it must engage in meaningful, rigorous review. It is a losing proposition to substitute the easy administrability and economic inaccuracy of spectrum concentration analysis for the complexity and economic rigor of a thorough competition review. Moreover, as the antitrust agencies and courts develop expertise, guidelines and doctrine in analyzing mergers and corporate acquisitions involving spectrum, the FCC — properly guided by the same standards and principles — will be able to draw on this body of law and economics to inform its own reviews of spectrum transfers arising outside of mergers.

There is nothing about telecommunications generally nor spectrum in particular that demands the development of a *sui generis* body of spectrum competition law. Although necessitating technical expertise to evaluate evidence and its implications, the analysis of the competitive consequences of spectrum transactions is a subset of antitrust law, and it should be applied as such by the FCC.

[29] *See* Comments of Geoffrey A. Manne & Berin Szoka, *IN RE* APPLICATION OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS AND SPECTRUMCO LLC FOR CONSENT TO ASSIGN LICENSES & APPLICATION OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS AND COX TMI WIRELESS, LLC FOR CONSENT TO ASSIGN LICENSES, WT Docket No. 12-4 (2012), *available at* http://techfreedom.org/sites/default/files/VZ_SpectrumCo_filing_0.pdf.